

CLAIMS

What is claimed is:

1. In a natural language, mixed-initiative system, a method of processing user dialogue comprising the steps of:
 - receiving a user input;
 - determining whether the user input specifies an action to be performed or a token of an action; and
 - selectively routing the user input to an action interpreter or a token interpreter according to said determining step.
2. The method of claim 1, said routing step further comprising:
 - classifying a token determined from the user input; and
 - routing the token to one of a plurality of token interpreters according to said classifying step.
3. The method of claim 2, wherein the classifying step identifies the token according to an action identified by the system, an action corresponding to a current state of a system, a category of the user input, a particular domain, or sub-domain.
4. In a natural language, mixed-initiative system, a method of processing user dialogue comprising the steps of:
 - receiving a first user input specifying an action;
 - providing said first user input to a processor configured to determine an action from received user input;
 - receiving a second user input;
 - determining whether the second user input specifies an action or a token corresponding to an action; and
 - providing the second user input to the processor configured to determine an action or to a processor configured to determine a token from received user input according to said determining step.

5. The method of claim 4, further comprising the step of performing the action specified by the first user input.

6. The method of claim 4, further comprising the step of determining that the second user input specifies a second action to be performed.

7. The method of claim 4, further comprising the steps of, after said step of providing the first user input to a processor, determining that a token is required to perform the action specified by the first user input and querying the user for the token.

8. A natural language, mixed-initiative system comprising:
an action interpreter configured to determine an action from a user input;
a token interpreter configured to determine a token from a user input to be used in performing an action; and

a main menu detector configured to distinguish a user input specifying a requested action from a user input specifying a token for performing an action, wherein said main menu detector routes user inputs specifying actions to said action interpreter and user inputs specifying tokens to said token interpreter.

9. The system of claim 8, wherein said action interpreter further determines a token from the user input provided to said action interpreter.

10. A natural language, mixed-initiative system comprising:
an action interpreter configured to determine actions from user inputs;
a plurality of token interpreters configured to determine tokens from user inputs to be used in performing an action;

an action router configured to receive actions and tokens and selectively route actions and tokens to one of said plurality of token interpreters;

a main menu detector configured to process context dependent data to distinguish user inputs specifying requested actions from user inputs specifying tokens for performing actions, wherein said main menu detector routes user inputs specifying

actions to said action interpreter and user inputs specifying tokens to said action router;
and

a classifier configured to distinguish user inputs specifying context dependent data from user inputs specifying context independent data, wherein said classifier routes user inputs specifying context dependent data to said main menu detector and user inputs specifying context independent data to said action interpreter;
wherein said action interpreter forwards actions to said action router.

11. A natural language, mixed-initiative system comprising:

means for receiving a user input;

means for determining whether the user input specifies an action to be performed or a token of an action; and

means for selectively routing the user input to an action interpreter or a token interpreter according to operation of said means for determining.

12. The system of claim 11, said routing step further comprising:

means for classifying a token determined from the user input; and

means for routing the token to one of a plurality of token interpreters according to said classifying step.

13. The system of claim 12, wherein the means for classifying identifies the token according to an action identified by the system, an action corresponding to a current state of a system, a category of the user input, a particular domain, or sub-domain.

14. A natural language, mixed-initiative system comprising:

means for receiving a first user input specifying an action;

means for providing said first user input to a processor configured to determine an action from received user input;

means for receiving a second user input;

means for determining whether the second user input specifies an action or a token corresponding to an action; and

means for providing the second user input to the processor configured to determine an action or to a processor configured to determine a token from received input according to operation of said means for determining.

15. A machine readable storage, having stored thereon a computer program for implementing a natural language, mixed-initiative system, said computer program having a plurality of code sections executable by a machine for causing the machine to perform the steps of:

- receiving a user input;
- determining whether the user input specifies an action to be performed or a token of an action; and
- selectively routing the user input to an action interpreter or a token interpreter according to said determining step.

16. The machine readable storage of claim 15, said routing step further comprising:

- classifying a token determined from the user input; and
- routing the token to one of a plurality of token interpreters according to said classifying step.

17. The machine readable storage of claim 16, wherein the classifying step identifies the token according to an action identified by the system, an action corresponding to a current state of a system, a category of the user input, a particular domain, or sub-domain.

18. A machine readable storage, having stored thereon a computer program for implementing a natural language, mixed-initiative system, said computer program having a plurality of code sections executable by a machine for causing the machine to perform the steps of:

- receiving a first input specifying an action;
- providing said first user input to a processor configured to determine an action from received user input;

receiving a second user input;

determining whether the second user input specifies an action or a token corresponding to an action; and

providing the second user input to the processor configured to determine an action or to a processor configured to determine a token from received user input according to said determining step.

19. The machine readable storage of claim 18, further causing the machine to perform the step of performing the action specified by the first user input.

20. The machine readable storage of claim 18, further causing the machine to perform the step of determining that the second user input specifies a second action to be performed.

21. The machine readable storage of claim 18, further causing the machine to perform the step of, after said step of providing the first user input to a processor, determining that a token is required to perform the action specified by the first user input and querying the user for the token.